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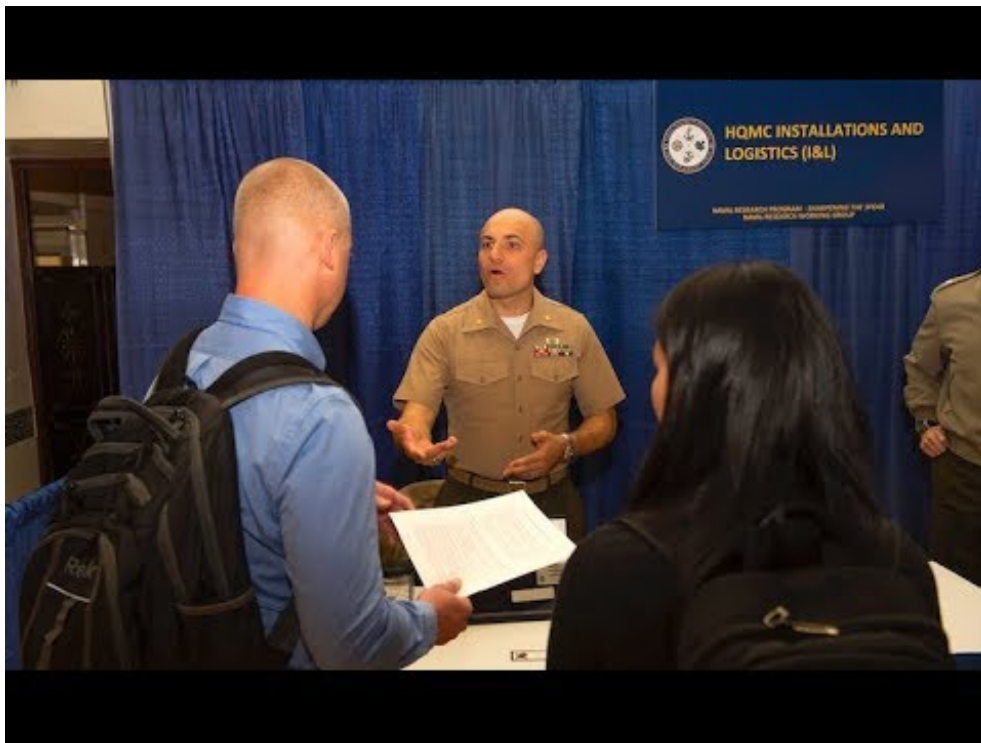
Annual NRWG Leverages NPS Expertise for Research and Innovation

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MC2 Patrick Dionne | April 18, 2019



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<https://youtu.be/HHuiHE1pTIQ>

The Naval Postgraduate School (NPS), as part of its Naval Research Program (NRP), held the annual Naval Research Working Group (NRWG) across the university's campus April 9-11. The NRWG serves as a forum for Navy and Marine Corps organizations to communicate, review, validate and recommend topics for NPS research over the coming fiscal year.

Now in its sixth year, the annual NRWG connects faculty and students with Department of Defense (DOD) organizations seeking to leverage their expertise and operational experience to overcome warfighter challenges through research. In total, representatives from 20 different organizations from throughout the Navy and Marine Corps team attended the conference.

"This is really a win-win for everyone," said Deputy Program Manager for NRP Lt. Col David Forbell. "For the Navy and Marine Corps representatives this provides an opportunity for them to get their research needs met at a minimal cost, and it allows NPS faculty and students to work on relevant real-world problems while meeting academic requirements. This also helps faculty keep their curriculum current and up to date on relevant challenges that helps underpin our student's thesis and capstone projects."

The conference format included poster sessions, panels, research trade shows and lab tours allowing students and representatives from around the fleet to network and understand the unique capabilities found at NPS.

Col. Todd Lyons, the NPS Senior Marine Corps Representative, stated during the event's kick off session that the NRWG is the perfect opportunity to put one's challenges front and center with people who want to solve those challenges.

"Most of the problems that we face today are interdisciplinary in nature," said Lyons. "Problems will not be solved purely by a computer scientist or an analyst working in isolation, they will be solved by a blend of unique talents from different schools of thought. There is where you find amazing value, and that is what NPS provides."

As a customary part of the NRWG, NPS incorporated its Secretary of the Navy Guest Lecture (SGL) series hosting keynote speaker retired Vice Adm. Paul Sullivan, Director of the Applied Research Laboratory of The Pennsylvania State University. Sullivan highlighted the importance of maintaining supremacy in research and development (R&D) through diversity, which presents many points of view and different ways of thinking often resulting in new directions for innovation.

"Look at this audience, for there are four military services at a minimum here," said Sullivan. "We have gender, racial and religious diversity. You're all here to fix problems that really exist out there, and you have a research base that just doesn't exist anywhere else. This is really powerful and it will help us out-innovate our enemies."

Sullivan also noted there are several innovative paths to be taken, and underscored the importance of understanding the difference between them.

"There a lot of ways to innovate and you should know which path you are working on because each may be different," said Sullivan. "Some innovative paths include discovering a new capability through production, harvesting existing innovation for military purposes, innovating existing technology for a new use, and combining one or more existing technologies to create newer capabilities. Knowing which path to take will ensure success in the innovation."

New to NRWG-19, subject matter experts from NPS held student-moderated panels on key issues such as cyber, human machine teaming and artificial intelligence to demonstrate current NPS research in these areas. In addition, NRWG-19 employed a new event management application, available on any smart device, which helped foster connections between topic sponsors, students and researchers.

"I have heard a lot of stories of people forming connections that they wouldn't have made otherwise if we didn't have these venues," said Forbell. "For many of our topic sponsors, this is their first time seeing NPS' capabilities and capacities. Now that they know NPS is here with these research capabilities, they know have another avenue to explore for solving problems."

For Cmdr. John Montinola, a sponsor representative from the office of Deputy Chief of Naval

Operations for Fleet Readiness and Logistics (OPNAV N4), these capabilities offer a great avenue to interact with other members of the analytic community in pursuit of new partnerships and opportunities.

“This has been a great way to look at real-world problems and collaborate,” said Montinola. “Many students have expressed interest in the topics and challenges we are facing.”

Col. Rob Bailey, commanding officer of Marine Corps Tactical Systems Support Activity (MCTSSA) of the Marine Corps Systems Command, stressed the importance of not only forming partnerships, but maintaining them into the fleet following a student’s graduation.

“We have real problems that we are working on, and these students who are here studying and getting technical degrees will follow up that work in the service,” said Bailey. “We can engage with them in this time frame to shape and guide their research interests so they can have the opportunity to utilize those skillsets to solve problems in their follow up tours.” MCTSSA tests and evaluates systems for operating forces for command and brought forward a number of proposals to NRWG including machine learning, artificial intelligence and cyber testing.

Amongst the students who expressed interest in a MCTSSA topic was Maj. Andrew Nelson, a computer science student in his third quarter.

“Since I have yet to declare my thesis, I was looking for ideas from different members of the Marine Corps community on problems they were looking to solve to see if any of them would align with my current curriculum,” said Nelson. “I received a lot of good information on possible thesis topics from the new and emerging issues from around the fleet.”

Since the inception of NRWG, more than 2,000 topics have been submitted through the Navy Research Program, including 293 in the last fiscal year. More than 350 research projects have been completed or are in progress.

“This event not only aids NPS in providing the highest quality graduate level education to our students, but also helps us further support the services as a whole,” said Forbell. “NPS provides them a DOD organization to help them face and tackle their specific challenges.”